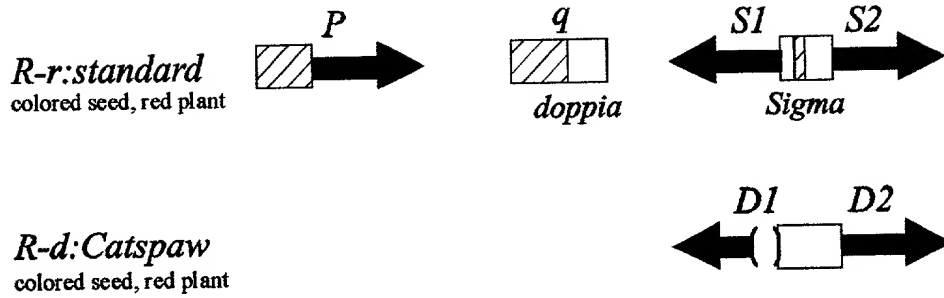


ABSTRACT OF THE DISCLOSURE

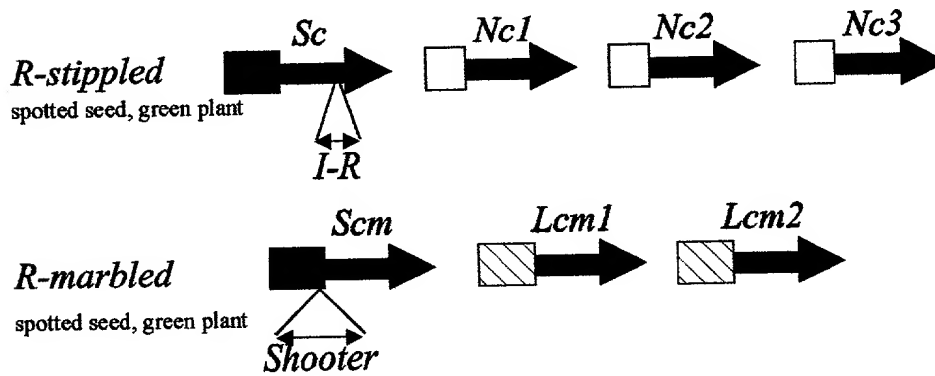
[00507] Transgenic silencing is a little understood process by which genes introduced into plants are turned off or silenced. Genetic screens were designed to identify corn mutants with reduced gene silencing activity. Such mutant corn lines include *Mop1-1*; *Mop1-2EMS*; *Mop2-1*, *mop3-1*; *CC2343*, *rmr1-1*; *rmr1-2*; *rmr2-1*; *rmr6-1*; *rmr7-1*; *rmr7-2*; *rmr8-1*; *rmr9-1*; *Mop1-4*; *Mop1-5*; and *rmr11-1* and seeds derived therefrom, the plants are useful for corn breeding programs to produce inbred and hybrid seed with reduced gene silencing activity.



A Paramutable



Paramutagenic



B

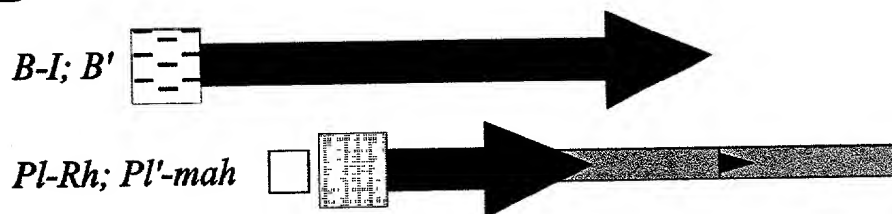


Figure 2

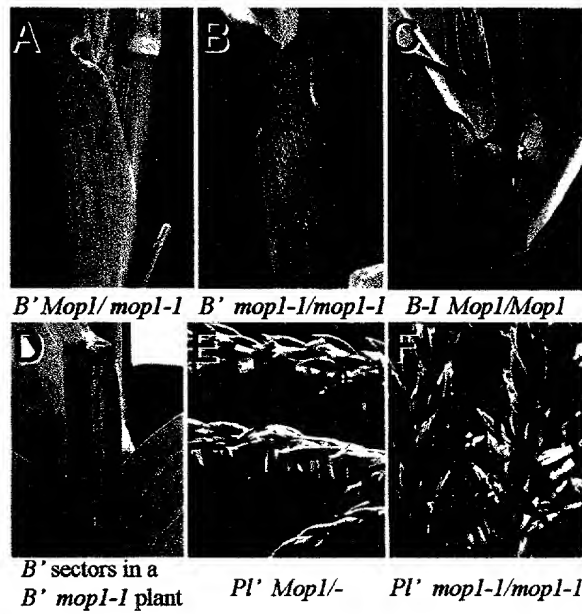


Figure 3

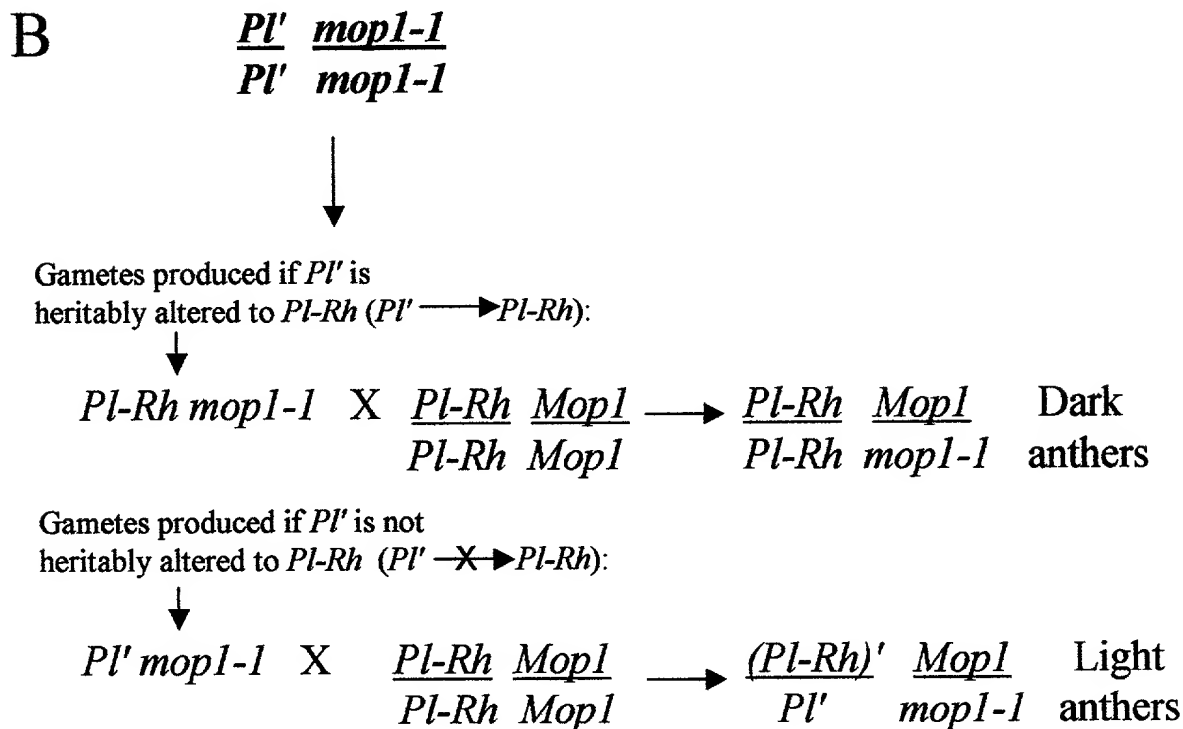
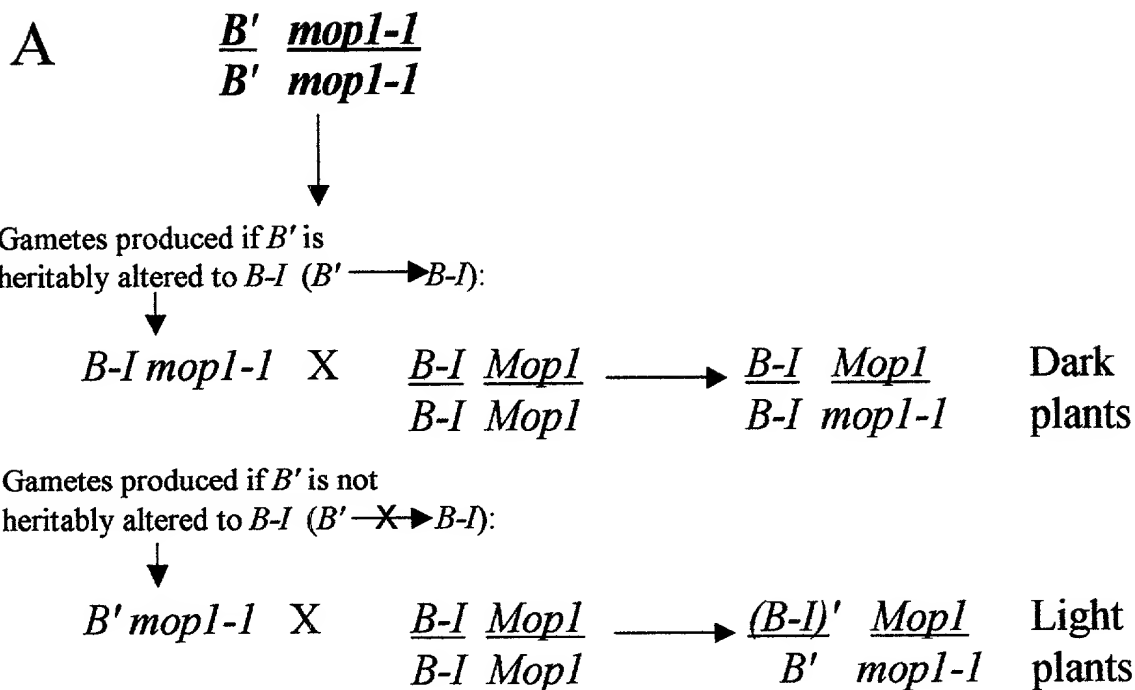


Figure 4

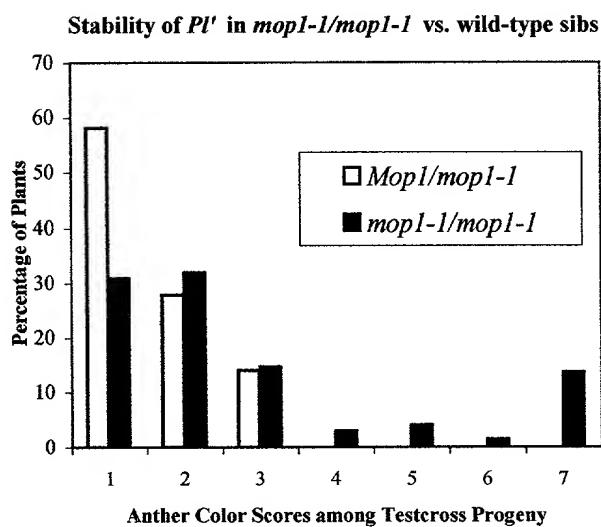


Figure 5

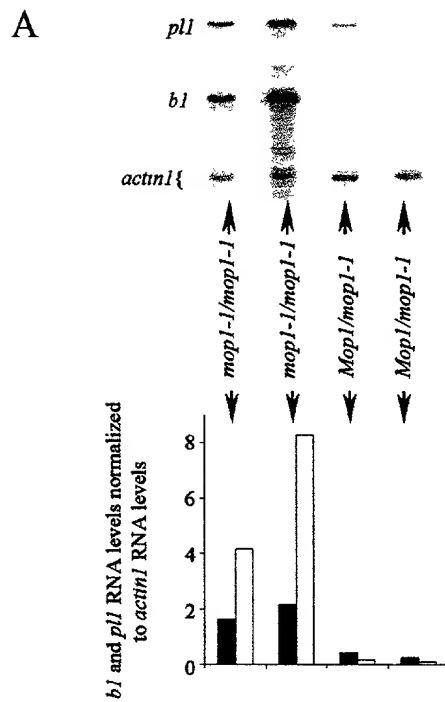


Figure 6

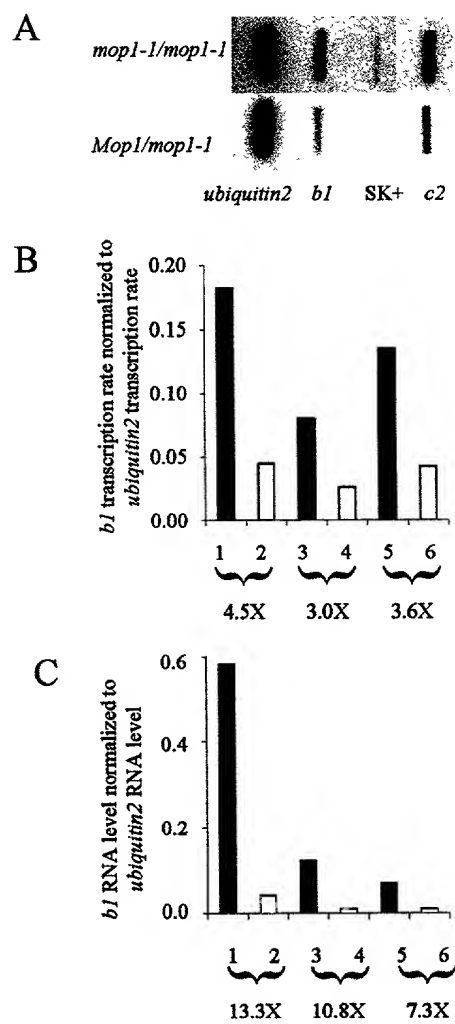
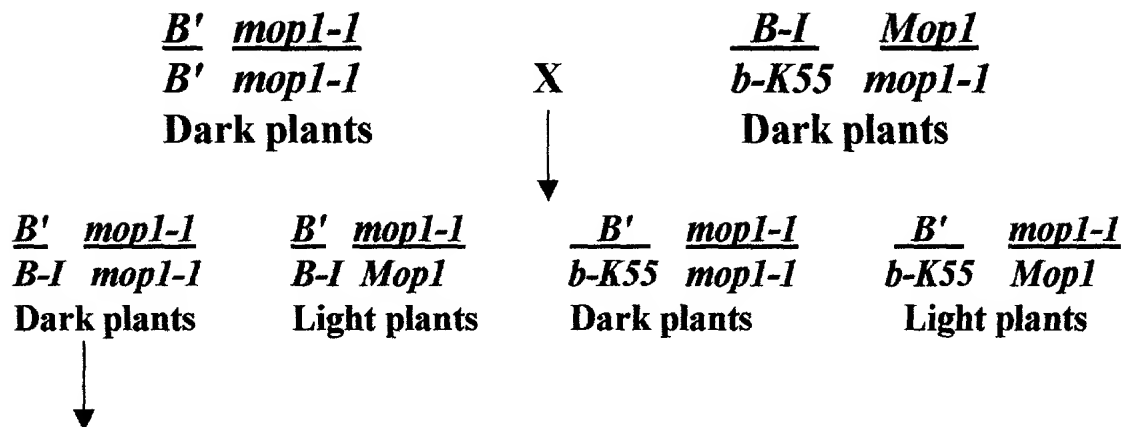


Figure 7





Testcross (by *B-Peru/B-I Mop1/Mop1* tester--diagram shows only *B-Peru* gametes of tester)

Gametes produced if paramutation
is prevented ($B-I \nrightarrow B'$):

50% $B' mop1-1$ X $B-Peru Mop1$ → $\frac{B'}{B-Peru} \frac{mop1-1}{Mop1}$ Light plants

50% $B-I mop1-1$ X $B-Peru Mop1$ → $\frac{B-I}{B-Peru} \frac{mop1-1}{Mop1}$ Dark plants

Gametes produced if paramutation
occurred ($B-I \rightarrow B'$):

100% $B' mop1-1$ X $B-Peru Mop1$ → $\frac{B'}{B-Peru} \frac{mop1-1}{Mop1}$ Light plants

Figure 9

A

<u><i>R-st</i></u>	<u><i>B-bar</i></u>	<u><i>pl-sr</i></u>	<u><i>Mop1</i></u>	X	<u><i>R-d</i></u>	<u><i>B-bar</i></u>	<u><i>pl-sr</i></u>	<u><i>Mop1</i></u>
<i>r-g</i>	<i>B'</i>	<i>Pl'</i>	<i>mop1-1</i>		<i>r-g</i>	<i>B'</i>	<i>Pl'</i>	<i>mop1-1</i>

↓

Four genotypes of interest among *R-d/- Pl'/-* progeny:

$\frac{3}{16}$	<u><i>R-d</i></u>	<u><i>Mop1</i></u>	Light plant
	<i>r-g</i>	-	
$\frac{3}{16}$	<u><i>R-d</i></u>	<u><i>Mop1</i></u>	Light plant
	<i>R-st</i>	-	
$\frac{1}{16}$	<u><i>R-d</i></u>	<u><i>mop1-1</i></u>	Dark plant
	<i>r-g</i>	<i>mop1-1</i>	
$\frac{1}{16}$	<u><i>R-d</i></u>	<u><i>mop1-1</i></u>	Dark plant
	<i>R-st</i>	<i>mop1-1</i>	

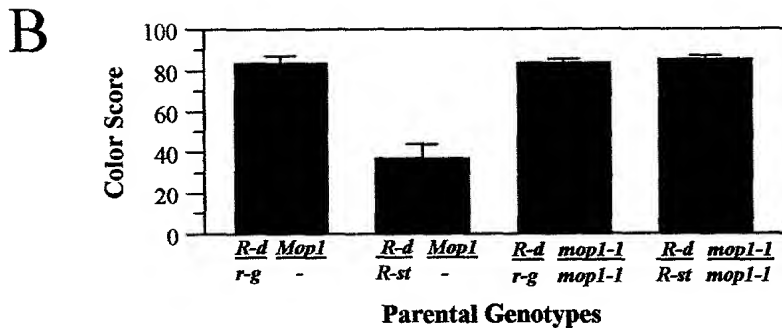


Figure 10

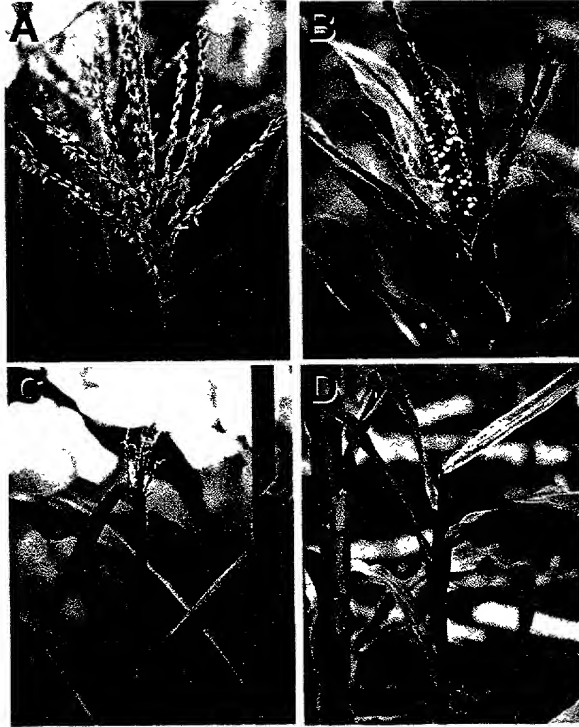


Figure 11

FOUO: 50322660

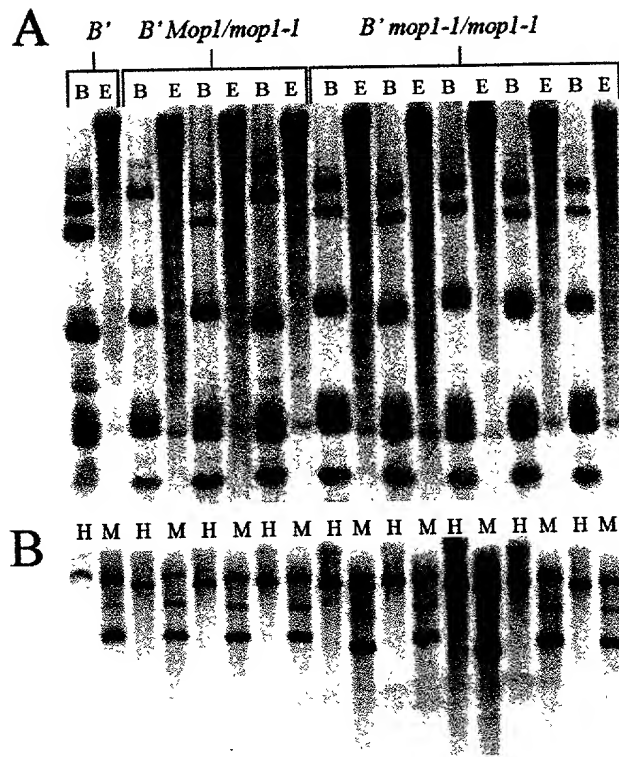


Figure 12

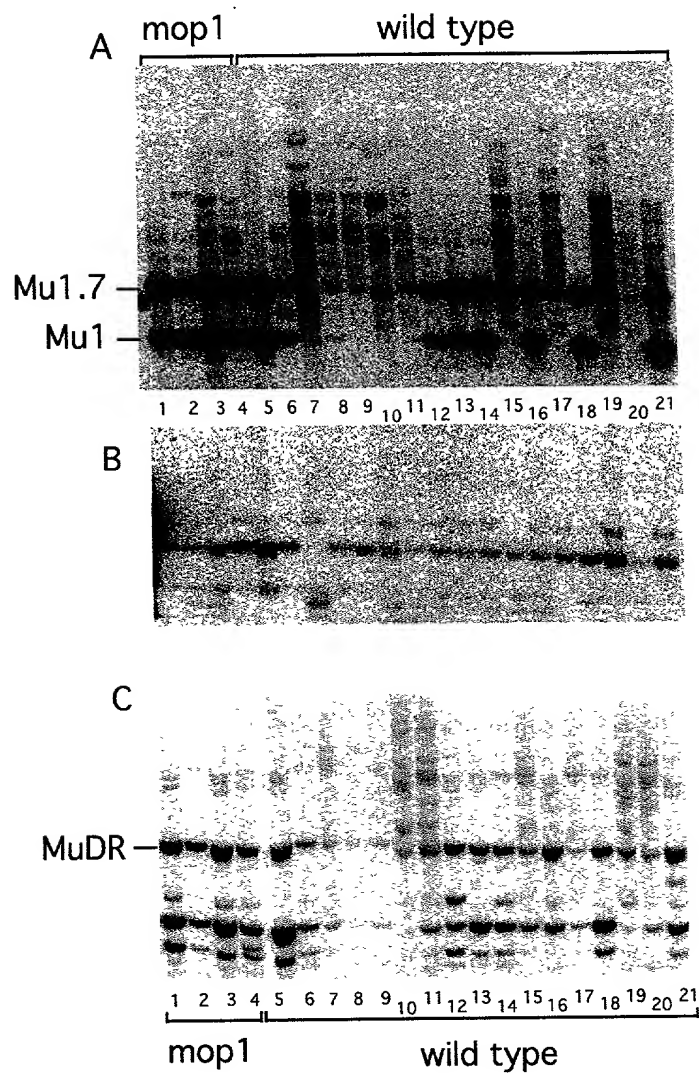


Figure 13

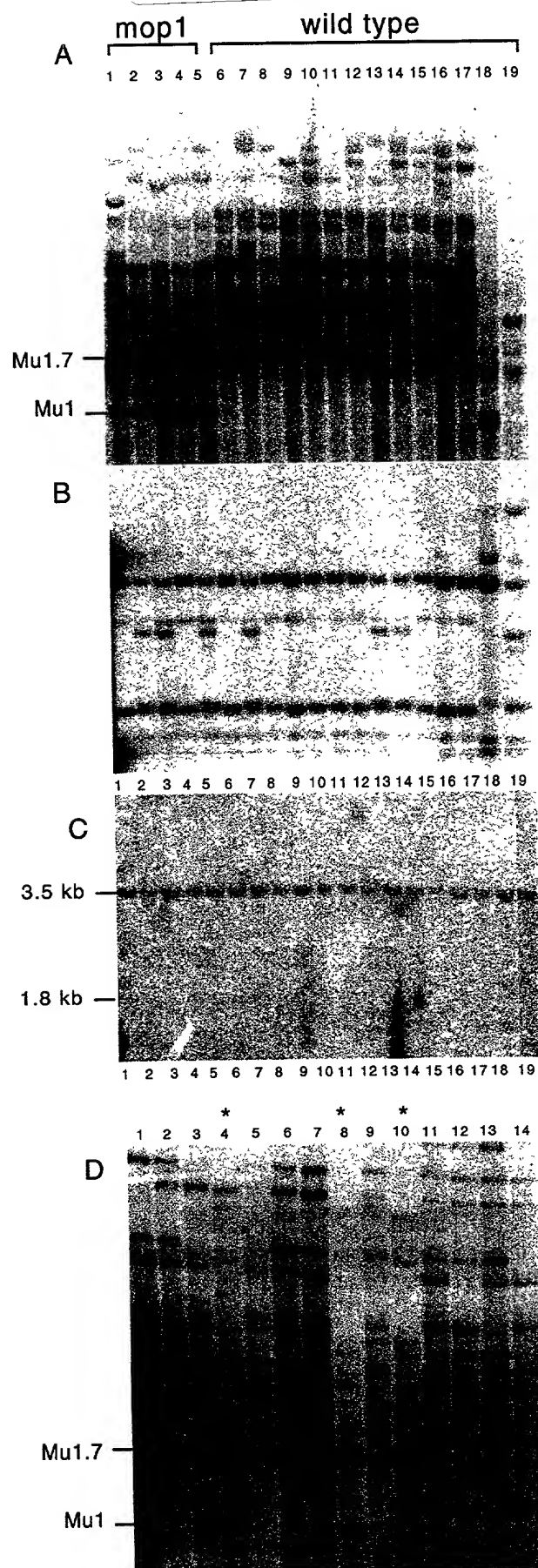


Figure 14

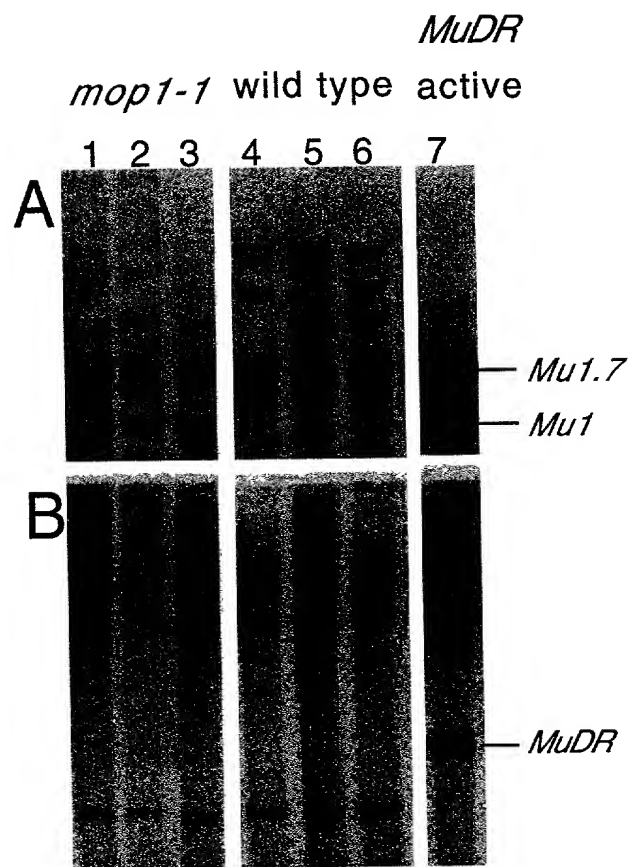


Figure 15

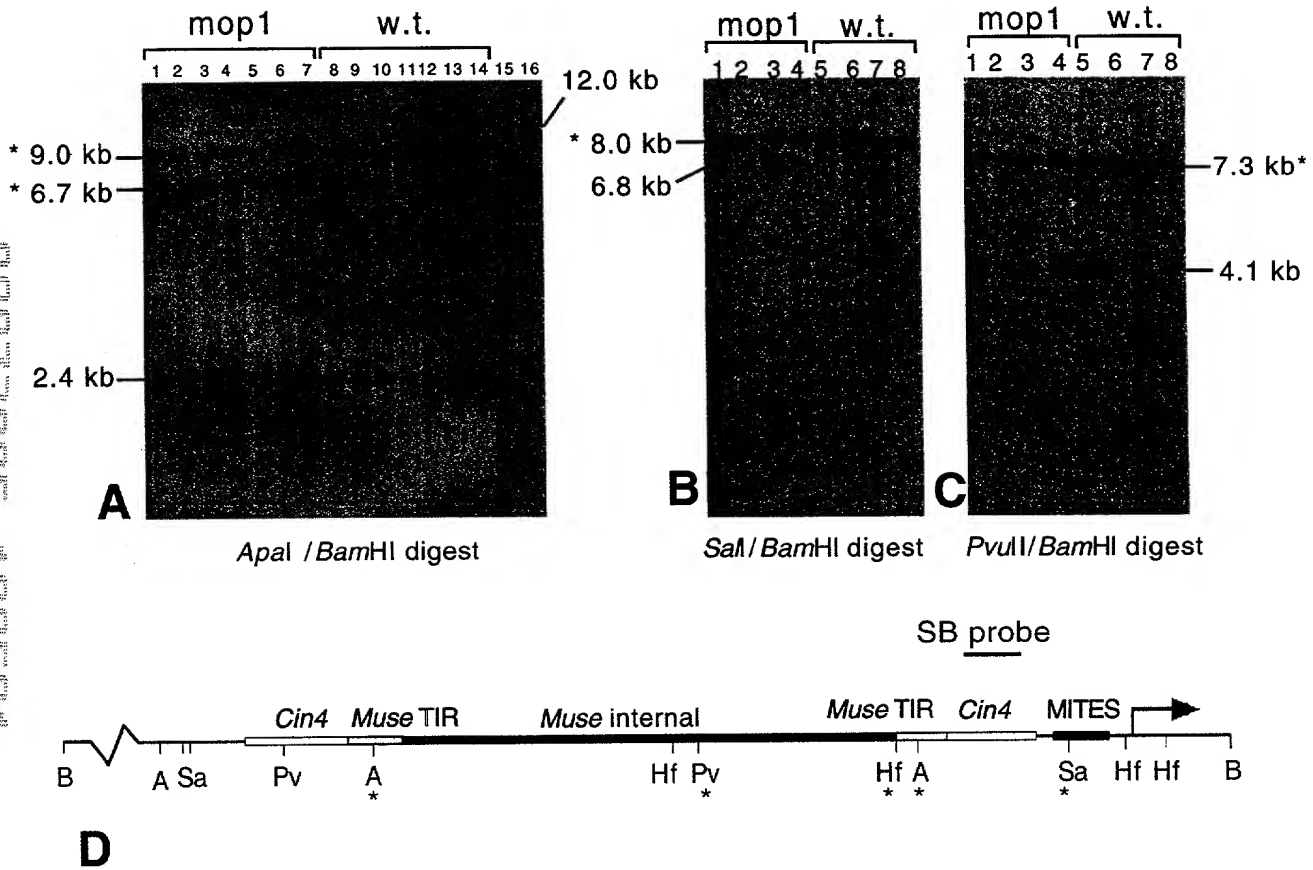


Figure 16

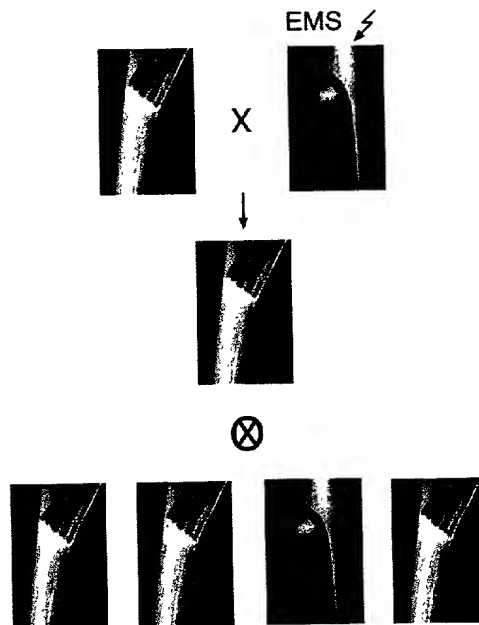


Figure 17

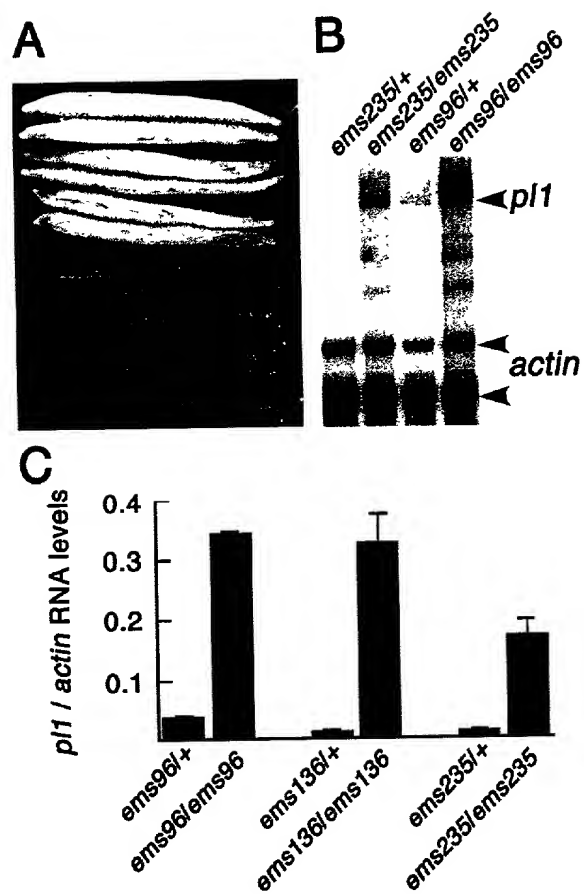


Figure 18

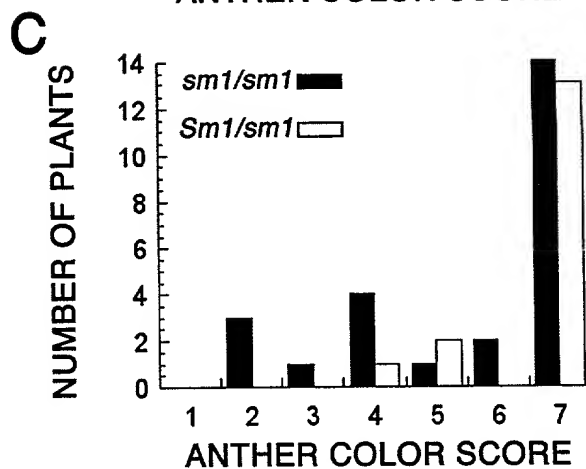
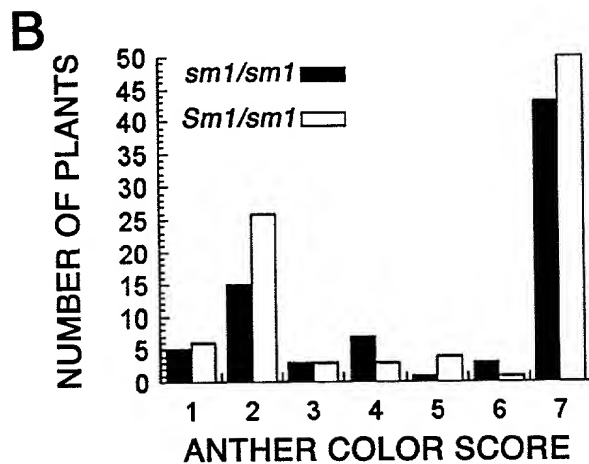
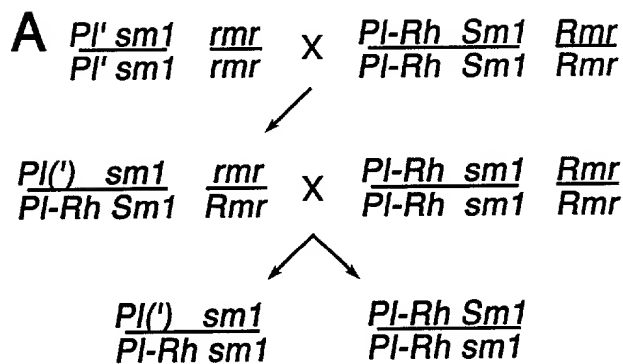


Figure 19

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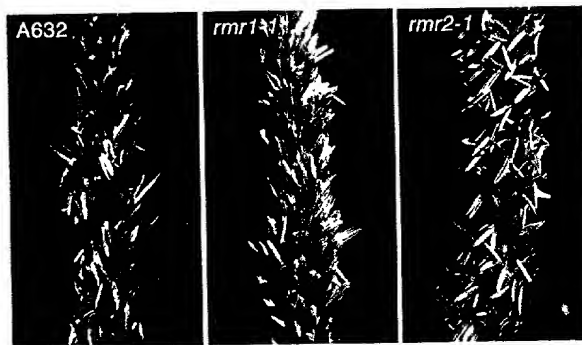


Figure 20

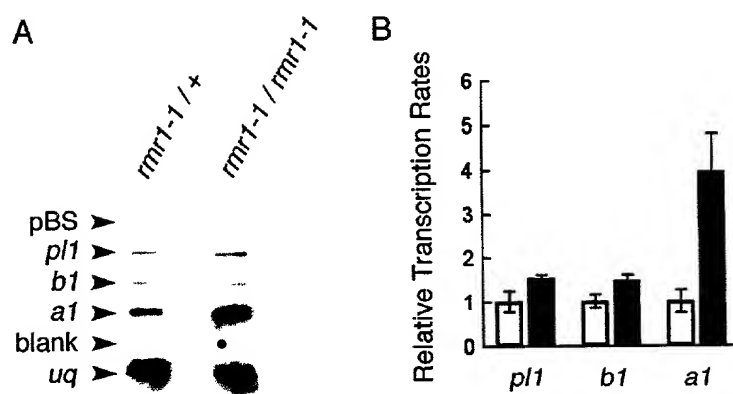


Figure 21

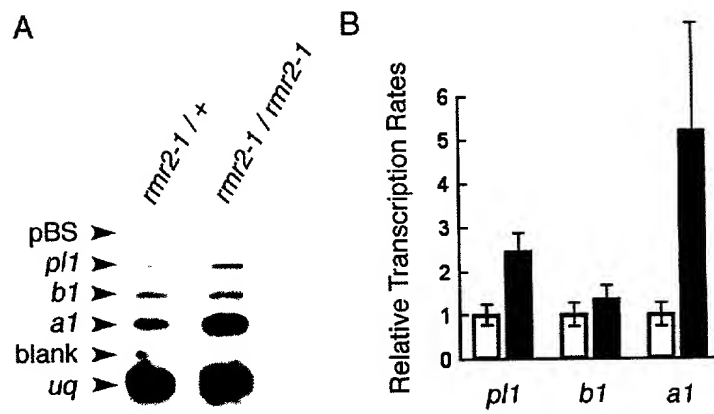


Figure 22



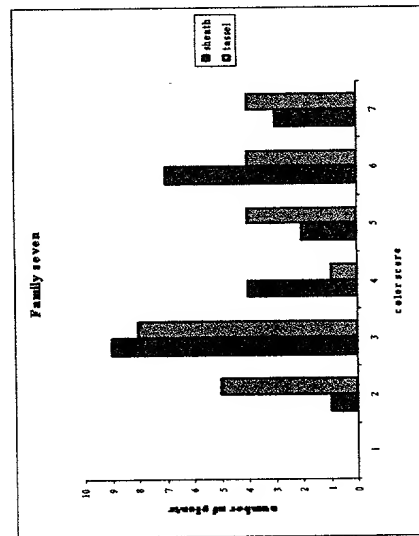
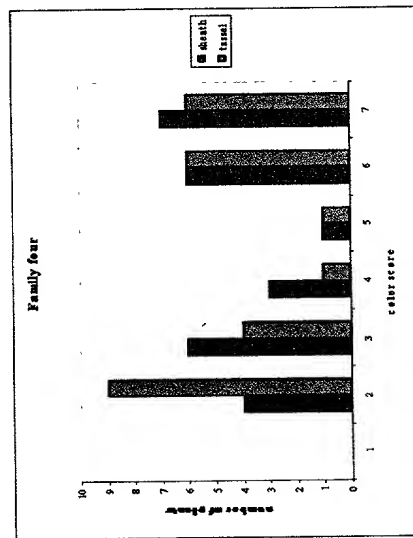
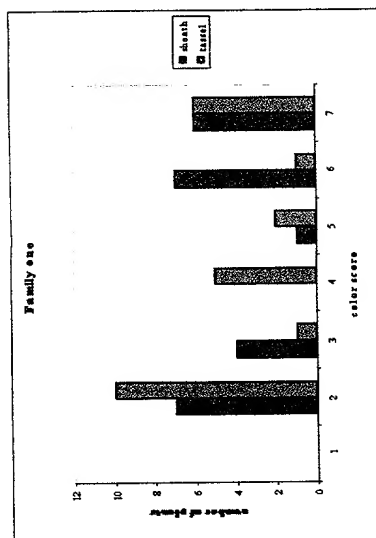
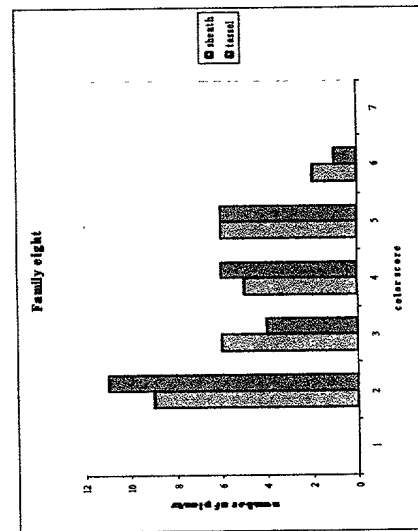
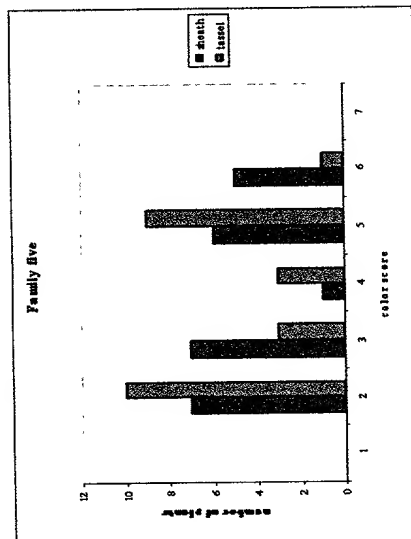
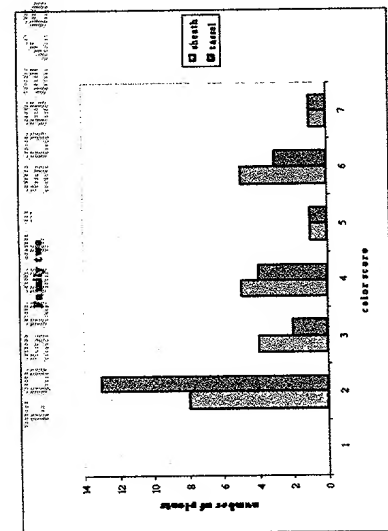
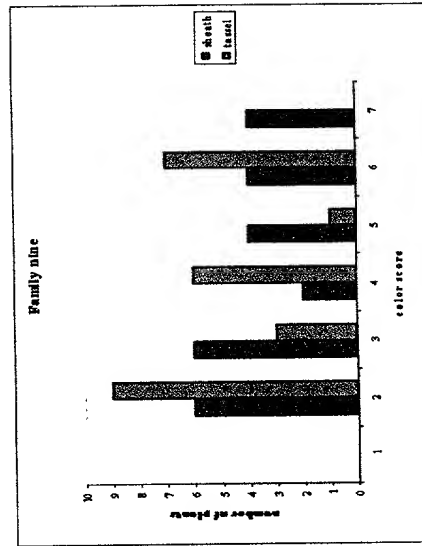
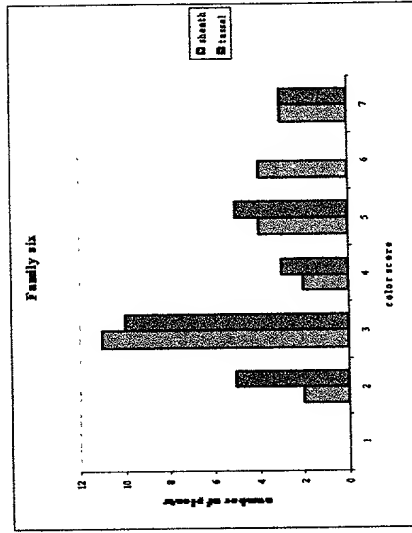
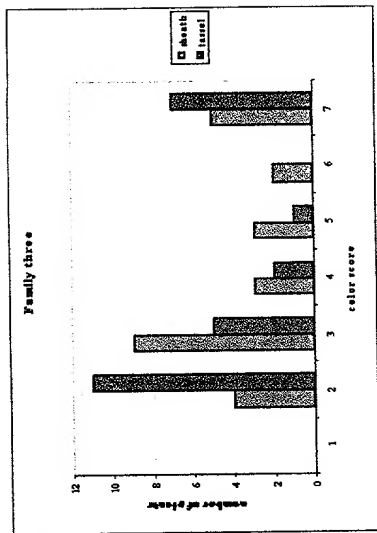


Figure 24

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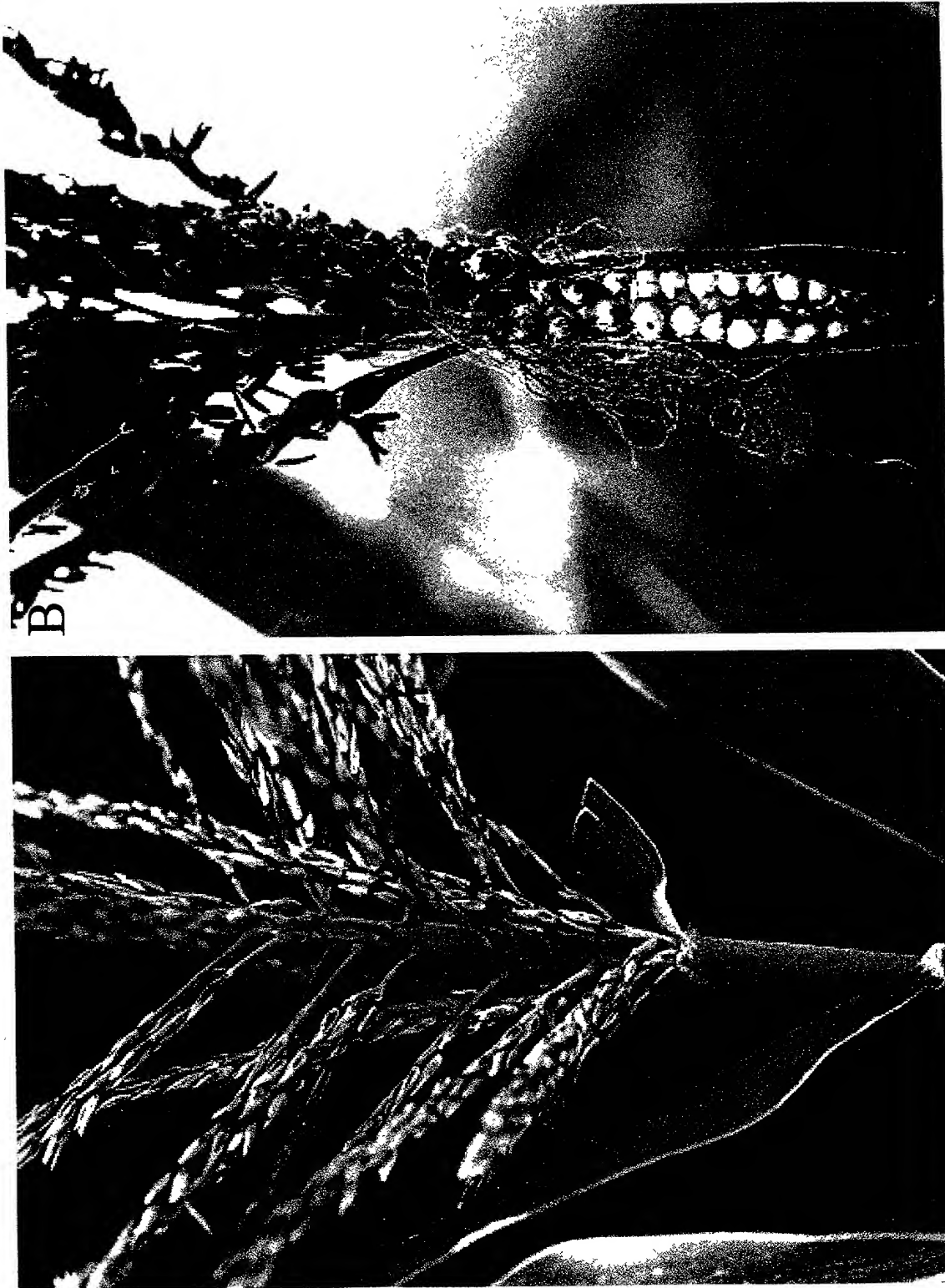


Figure 25

FOOT-50822660

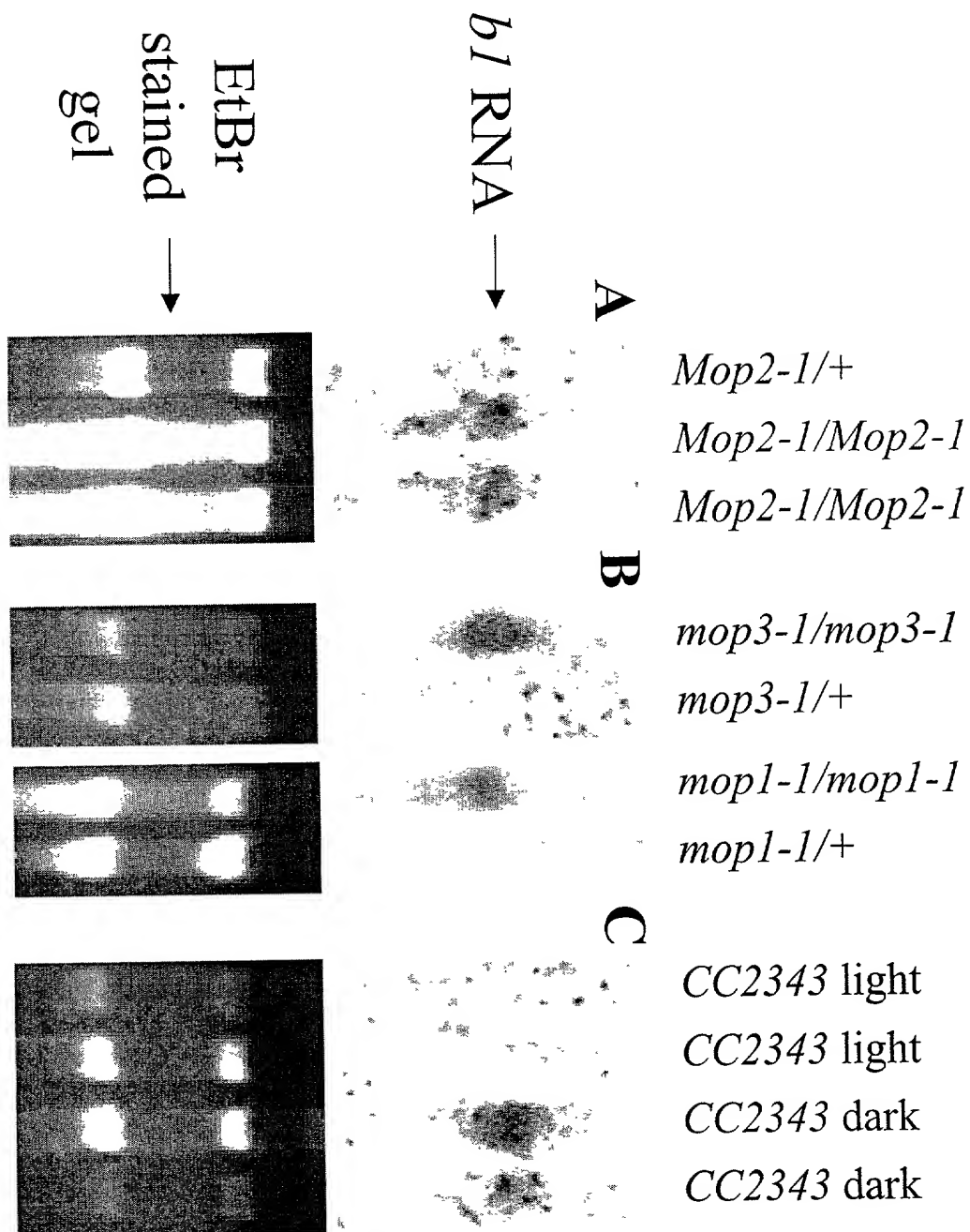


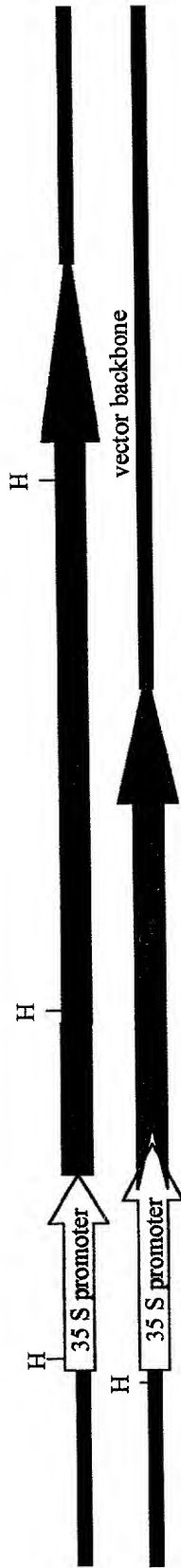
Figure 26

09072806 100501

[illegible]

1993

35SB-Igen



BBBS



Figure 28

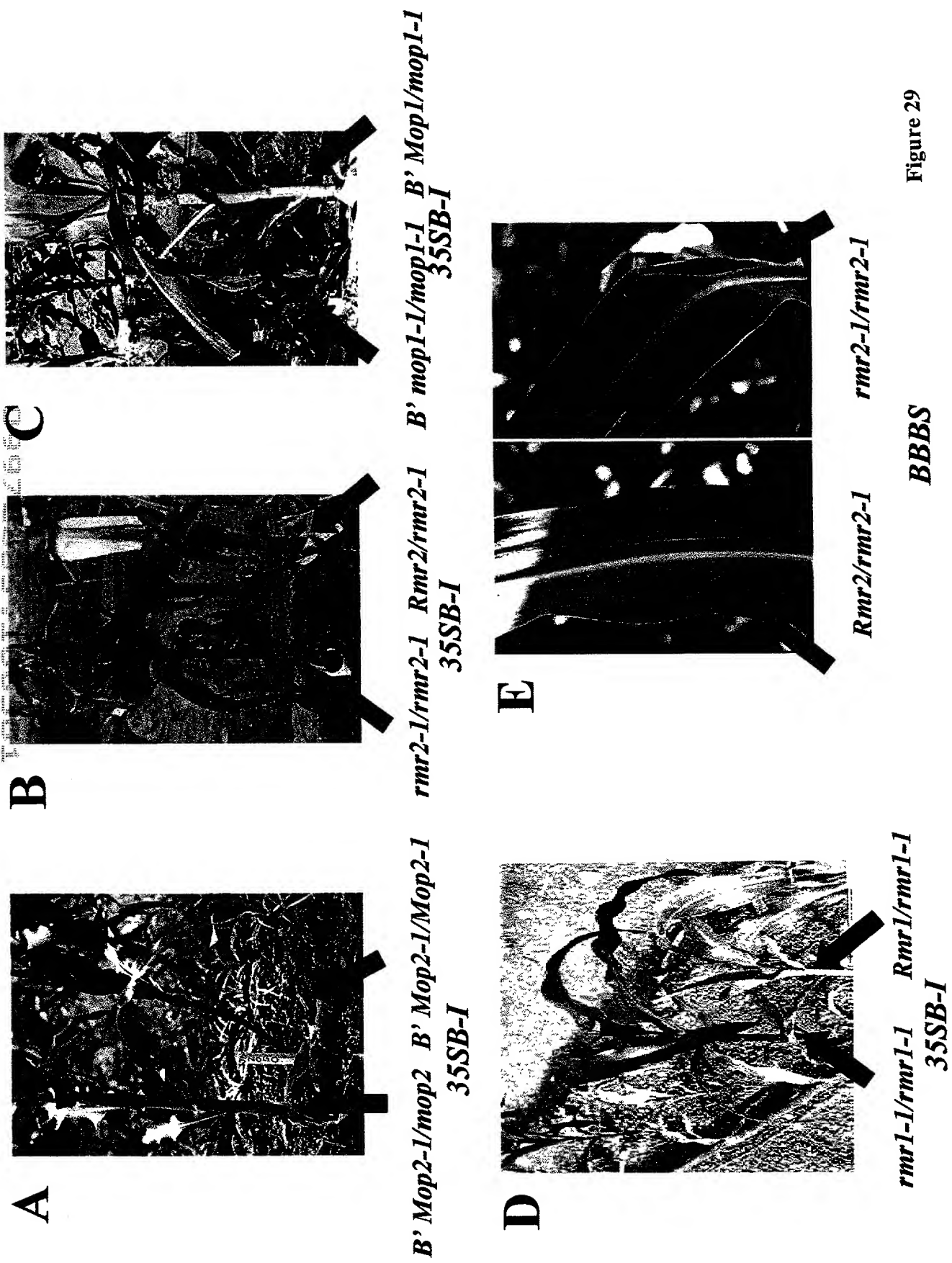
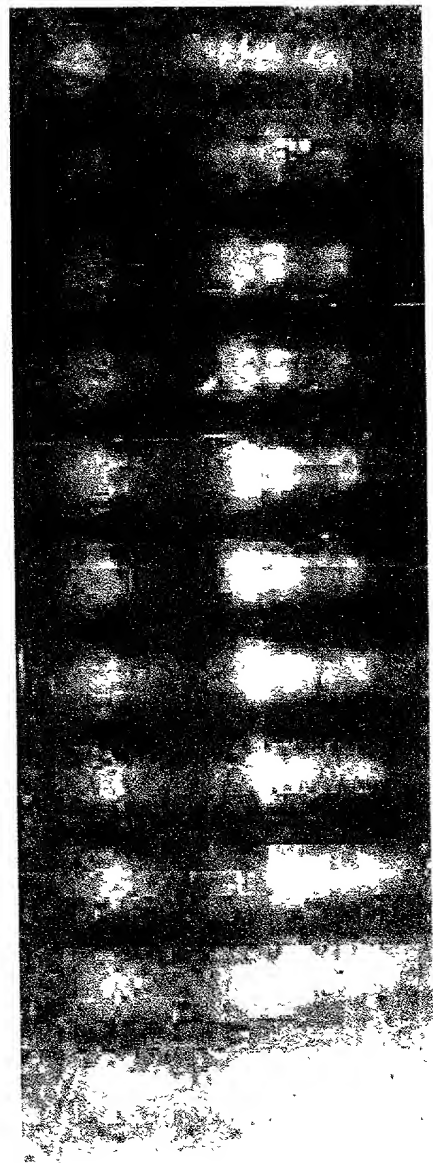


Figure 29

105001-50322650

<i>rmr1-1</i>			<i>rmr1-1</i>			<i>rmr2-1</i>			<i>rmr2-1</i>			<i>mop1-1</i>			<i>mop1-1</i>		
homo			het			homo			het			homo			het		
Dk	Dk	Lt	Dk	Dk	Lt	Dk	Dk	Lt	Dk	Dk	Lt	Dk	Dk	Lt	Dk	Dk	Lt

B →



Stained
Gel

Figure 30

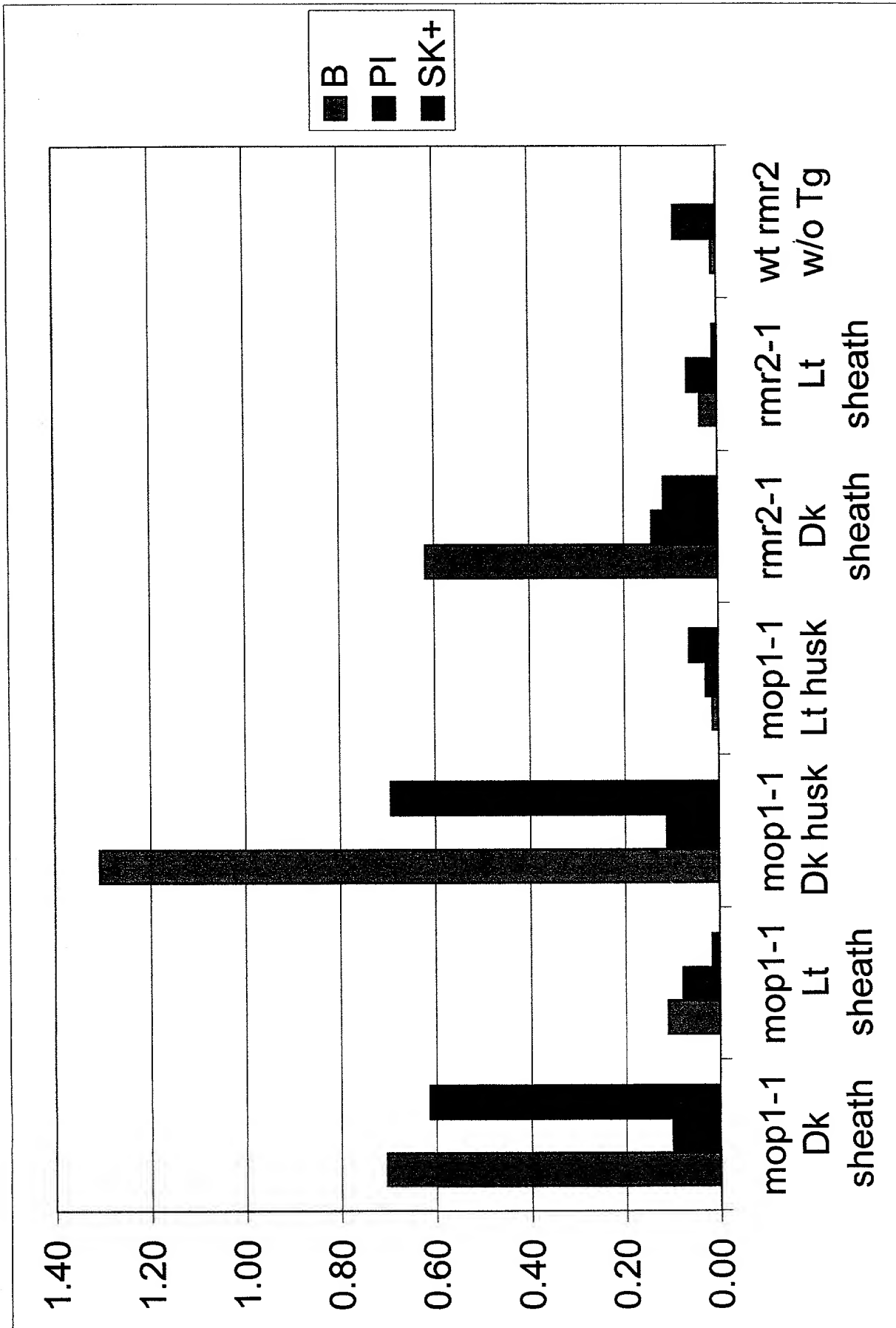


Figure 31

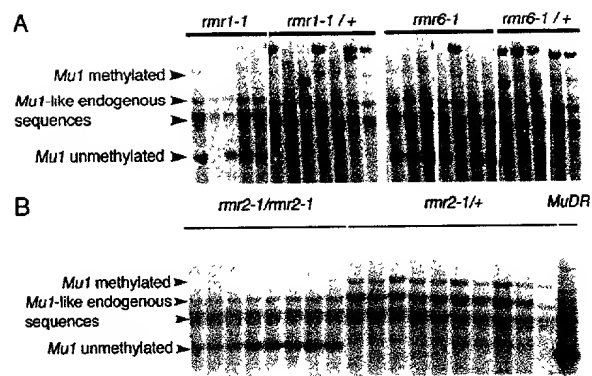


Figure 32

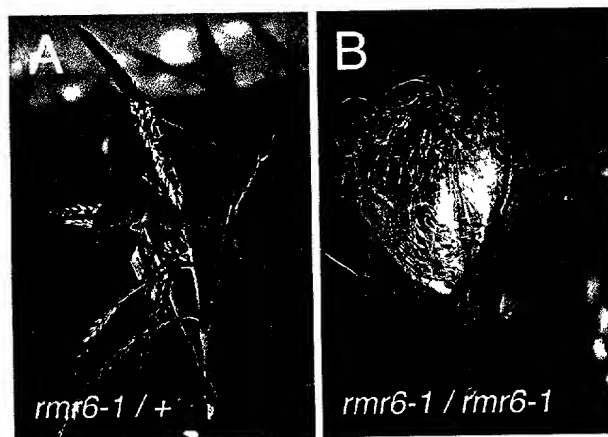


Figure 33

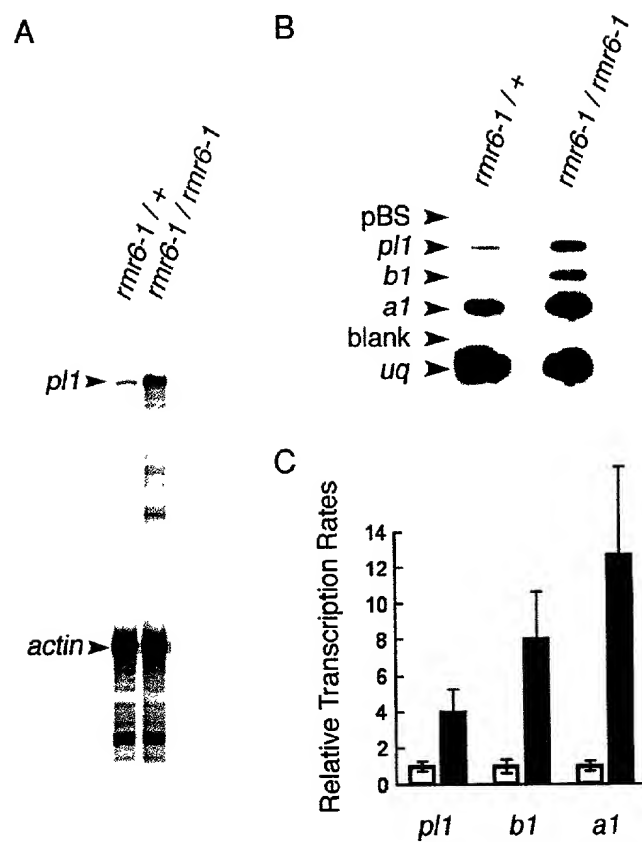


Figure 34